Release of AHRQ Emergency Department Prevention Quality Indicators (ED PQI) Beta Software for Windows, v2023.0.1

Prepared for:

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1.0   Introduction to Release Notes for v2023.0.1

The Agency for Healthcare Research and Quality (AHRQ) announces a minor release of the AHRQ Quality Indicators (QI) software for Emergency Department Prevention Quality Indicators (ED PQI) Beta Version 2023. . Version 2023.0.1, December 2023, is an update to the v2023 software that applies to the ED PQI Beta Windows application.

The following items summarize the changes in v2023.0.1 from v2023.

1.1 Fixes Issue with Loading Quoted Data Values

Version 2023.0.1 addresses an issue where the v2023 ED PQI Beta Windows software fails to process input data files having quoted values. While the application provides an option to process input data files with quoted values (e.g., "value"), the software will not load the input data file when data values are quoted, even when this option is enabled in the software. This issue is resolved in the v2023.0.1 minor release and the input data files with quoted values will be correctly processed.

1.2 Increases the Length of VisitLink

ED PQI Beta Windows v2023.0.1 increases the length of the data element "VisitLink." Users reported identifiers used for VisitLink tend to exceed the maximum threshold allowed by the software. In this scenario, the v2023 software reported this as an error and set the VisitLink to missing, causing some visits to be omitted from PQE 05 ED Visits for Back Pain calculations. ED PQI Beta Windows v2023.0.1 addresses this issue by increasing the maximum length for VisitLink. ED PQI Beta Windows v2023.0.1 expects VisitLink to be a numeric field of length 8.

Previous Release Notes for ED PQI Beta Windows v2023 below also apply to v2023.0.1.

2.0   Previous Release Notes for ED PQI Beta Windows v2023

Version 2023 of AHRQ's Quality Indicators (QI) includes the beta release of a new module: The Emergency Department Prevention Quality Indicators (ED PQI).

The ED PQI[1] include five measures:

- PQE 01 - Emergency Department (ED) Visits for Non-Traumatic Dental Conditions
- PQE 02 - ED Visits for Chronic Ambulatory Care Sensitive Conditions
- PQE 03 - ED Visits for Acute Ambulatory Care Sensitive Conditions
- PQE 04 - ED Visits for Asthma
- PQE 05 - ED Visits for Back Pain

Technical specifications are available at https://qualityindicators.ahrq.gov/measures/ED_PQI_TechSpec.

These QIs are area-level measures, similar to those included in the PQI and PDI modules. While those measures are rates of inpatient discharges, the ED PQI are rates of ED visits.

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[1]When referencing the Emergency Department Prevention Quality Indicators, the abbreviation ED PQI is used for the module or set of indicators, while the abbreviation PQE is used for individual indicators.

Like other area-level QIs, ED PQI are avoidable use measures. They identify conditions for which access to quality ambulatory care can reduce the likelihood of hospital care. Also, like other area-level QIs, the measure denominators are defined by membership in population. The denominators of the measures include a mix of adults and children, which varies depending on the measure.

The development of the ED PQI is detailed in the publication: *Development and Validation of the Agency for Healthcare Research and Quality Measures of Potentially Preventable Emergency Department (ED) Visits: The ED Prevention Quality Indicators for General Health Conditions*[2].

3.0 Data Inputs

The ED PQI numerators include treat-and-release cases from the ED and inpatient discharges admitted through the ED. The AHRQ ED PQI [Beta] Software v2023 uses the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID) and State Emergency Department Databases (SEDD) to compile reference (general or standard) population data. The reference population used for this software release includes visits contained in the SEDD and discharges admitted through the ED in the SID, which are the source of the benchmarks and parameters provided with the software.

PQE 05, Visits for Back Pain, differs from other ED PQI and area-level QIs in that the numerator is the count of patients with two related visits within the year. Thus, the numerator definition requires that a single patient's hospital encounters during the year be identified. The reference population for this measure is from a subset of states with SEDD and SID data that permit linkages across visits by a single individual.

4.0 Beta Software

AHRQ ED PQI [Beta] Software v2023 is similar to that of the other area-level QIs – the set of SAS programs is the same, and similar options are offered for calculating and outputting observed and risk adjusted rates. Likewise, the Windows version of the ED PQI software functions the same way as the WinQI software.

Like PQIs and area-level PDIs, the SAS and Windows software provides risk adjustment for age and sex or age, sex, and poverty decile and smoothed rates, adjusted for reliability.

Both software applications differ from prior modules in that they use a combined input data set (ED visits and inpatient discharges admitted through the ED) and contain several additional variables that identify ED admissions and the relation of the hospital to patient's place of residence. PQE 05 requires additional variables to link visits for the same patient. Software output is similar to other area-level modules but is not racially stratified in the current release. Software instructions for the ED PQI module is included in the Quality Indicators Software Instructions and Data Dictionary, SAS® QI v2023, which is available at https://qualityindicators.ahrq.gov/Downloads/Software/SAS/V2023/Software_Inst_SASQI_v2023_September_2023.pdf. Software instructions and installation guide for the Windows version of the ED PQI software are included in AHRQ Quality Indicators Software Instructions, Windows® Application, which

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[2]Davies S, Schultz E, Raven M, Wang NE, Stocks CL, Delgado MK, McDonald KM. Development and Validation of the Agency for Healthcare Research and Quality Measures of Potentially Preventable Emergency Department (ED) Visits: The ED Prevention Quality Indicators for General Health Conditions. Health Serv Res. 2017 Oct;52(5):1667-1684. doi: 10.1111/1475-6773.12687. Epub 2017 Mar 30. PMID: 28369814; PMCID: PMC5583364. https://pubmed.ncbi.nlm.nih.gov/28369814/. Accessed August 28, 2023.

is available at
https://qualityindicators.ahrq.gov/Downloads/Software/WinQI/V2023/Software_Inst_WINQI_V2023_August_2023.pdf.

For questions or comments, please contact the QI Technical Support Team at QISupport@ahrq.hhs.gov. Messages are responded to within three business days.

5.0   Population Files

The AHRQ ED PQI ^{Beta} Software v2023 reference population is from the year 2019, so that benchmarks and parameters are from a period representative of normal ED experience, rather than 2020, which is more recent but strongly affected by the public health emergency. The software uses SID and SEDD data to create risk adjustment models with parameter estimates based on national estimates that can be used at the local level and to establish national benchmarks. HCUP is a family of healthcare databases and related software tools and products developed through a Federal-State-industry partnership and sponsored by AHRQ. HCUP databases bring together the data collection efforts of State data organizations, hospital associations, private data organizations, and the Federal government to create a national information resource of encounter-level healthcare data. HCUP includes the largest collection of longitudinal hospital care data in the United States, with all-payer, encounter-level information beginning in 1988. These databases enable research on a broad range of health policy issues, including cost and quality of health services; medical practice patterns; access to healthcare programs; and outcomes of treatments at the national, State, and local market levels. In total, the HCUP SID encompasses about 97 percent of all annual inpatient discharges in the United States.

Population data for the reference population are from the same Census files as for PQIs and area-level PDIs (2000-2022_Population_Files_V2023.txt) and the same county-level population counts are used. Reference population data are provided for the denominator with the software by default; users may also supply their own denominator data. Please see the details around the population file methodology at: http://www.qualityindicators.ahrq.gov/Downloads/Software/SAS/V2023/AHRQ_QI_v2023_ICD10_Population_File.pdf.